

What is claimed is:

I claim:

1. A prodrug for use in the treatment of physiological conditions comprising a carrier moiety selected from the group comprising cinnamoyl, benzoyl, phenylacetyl, 3,4-methylenedioxycinnamoyl and 3,4,5-trimethoxycinnamoyl, wherein the carrier moiety is chemically linked to a therapeutic polypeptide of the general formula  $aa_n$ , where  $aa$  is an amino acid or a chemical or structural variation thereof, where  $n$  is an integer from 2 to 10, and wherein the polypeptide is poorly absorbed orally.
2. The prodrug of claim 1, wherein  $n$  is an integer from 3 to 6.
3. The prodrug of claim 1, wherein  $n$  is 5.
4. The prodrug of claim 1, wherein the polypeptide is Tyr-Gly-Gly-Phe-Met.
5. The prodrug of claim 1, wherein the prodrug further comprises a non-therapeutic linker species linking the polypeptide to the carrier species.
6. The prodrug of claim 5, wherein the linker species is an amino acid.
7. A pharmaceutical composition comprising a carrier moiety selected from the group comprising cinnamoyl, benzoyl, phenylacetyl, 3,4-methylenedioxycinnamoyl and 3,4,5-trimethoxycinnamoyl chemically linked to a

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therapeutic polypeptide of the general formula  $aa_n$ , where  $aa$  is an amino acid or  
5 a chemical or structural variation thereof, where  $n$  is an integer from 2 to 10,  
wherein the polypeptide is poorly absorbed orally, and a pharmaceutically  
effective adjuvant species.

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amino acid.

8. A method for enhancing the oral availability of therapeutic  
polypeptides of the general formula  $aa_n$ , where  $aa$  is an amino acid or a  
chemical or structural variation thereof, where  $n$  is an integer from 2 to 10, and  
wherein the polypeptide is poorly absorbed orally, wherein the method comprises  
5 the step of chemically linking the polypeptide to a carrier moiety selected from  
the group comprising cinnamoyl, benzoyl, phenylacetyl, 3,4-  
methylenedioxycinnamoyl and 3,4,5-trimethoxycinnamoyl to form a prodrug.

9. The method of claim 8, wherein the polypeptide is chemically  
linked to the carrier moiety through a non-therapeutic linker species.

10. The method of claim 9, wherein the linker species is an  
amino acid.

11. A method for the treatment of a physiological condition  
through the oral administration of a therapeutically effective species comprising  
the steps of:

5 a.) chemically linking a therapeutic polypeptide of the  
general formula  $aa_n$ , where  $aa$  is an amino acid or a chemical or  
structural variation thereof, where  $n$  is an integer from 2 to 10, and  
wherein the polypeptide is poorly absorbed orally, to a carrier  
moiety selected from the group comprising cinnamoyl, benzoyl,

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phenylacetyl, 3,4-methylenedioxycinnamoyl and 3,4,5-trimethoxycinnamoyl to form a prodrug; and

b.) orally administering the prodrug to a patient exhibiting the physiological condition.

12. The method of claim 11, wherein the polypeptide is chemically linked to the carrier moiety through a non-therapeutic linker species.

13. The method of claim 12, wherein the linker species is an amino acid.

14. A method for the controlled release administration of a therapeutically effective polypeptide of the general formula  $aa_n$ , where  $aa$  is an amino acid or a chemical or structural variation thereof, where  $n$  is an integer from 2 to 10, and wherein the polypeptide is poorly absorbed orally, comprising the steps of:

a.) chemically linking the polypeptide to a carrier moiety selected from the group comprising cinnamoyl, benzoyl, phenylacetyl, 3,4-methylenedioxycinnamoyl and 3,4,5-trimethoxycinnamoyl to form a prodrug; and

b.) orally administering the prodrug to a patient.

15. The method of claim 14, wherein the polypeptide is chemically linked to the carrier moiety through a non-therapeutic linker species.

16. The method of claim 15, wherein the linker species is an amino acid.

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